

AMENDMENTS TO THE DRAWINGS

The attached sheet of drawings includes changes to Figure 1. This sheet, which includes Figure 1 only, replaces the original sheet including Figure 1. In Figure 1, a -- Prior Art-- designation has been added.

Attachment: Replacement Sheet
Annotated Sheet Showing Changes Made in Red

REMARKS

The foregoing amendment amends claims 1, 14, 15 and 19. Pending in the application are claims 1-20, of which claims 1, 14, 15 and 19 are independent. The following comments address all stated grounds for rejection and place the presently pending claims, as identified above, in condition for allowance.

Claim 1 is amended to specify that each connector housing includes a receptacle for releasably housing a connector half. Support for the amendment can be found throughout the application as originally filed, at least, for example, on page 4, lines 1-9, page 7, lines 6-8 and lines 26-33, as well as Figures 2 and 6-9, of the application as originally filed. Claim 1 is also amended to correct for the lack of antecedent basis for the “body tab” and the “collar tab.”

Claim 14 is amended to specify that the claimed plug receptacle receives a *wired end* of the plug, as shown in Figures 2 and 6.

Claim 15 is amended to specify that the first cavity is formed in a back end of the housing and that the second cavity is formed in formed in a front end of the housing, as shown in Figures 8 and 9 and described at least on page 8, line 32 through page 9, line 5.

Claim 19 is amended to specify that the plug receptacle releasably retains a wired end of the plug. The amendment to claim 19 further specifies that a mating end of the plug protrudes from the first end of the plug housing when retained by the receptacle, as shown in Figures 2 and 6. *No new matter is added.*

Amendment and/or cancellation of the claims is not to be construed as an acquiescence to any of the objections/rejections set forth in the instant Office Action or any previous Office Action, and is done solely to expedite prosecution of the application. Applicant reserves the right to pursue the claims as originally filed, or similar claims, in this or one or more subsequent patent applications.

Information Disclosure Statement

Applicants include herewith an Information Disclosure Statement to submit references for the Examiner’s consideration.

Drawings

Applicants have amended Figure 1 to include a ---Prior Art--- designation, as requested on page 2 of the Office Action.

Claim Objections

Regarding the objection to claim 1 for reciting “the body tab” in line 20 without proper antecedent basis, Applicants have amended claim 1 on line 13 to provide antecedent basis for this recitation.

35 U.S.C. §102 Rejections

In the Office Action, the Examiner rejects claims 1, 2, 6-12, 19 and 20 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent Number 5,167,522 of Behning, which is assigned to the same assignee of the present application. The Examiner rejects claim 14 under 35 U.S.C. §102(b) as being anticipated by Applicant’s Admitted Prior Art (AAPA) in Figure 1 of the present application. The Examiner rejects claim 15 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent Number 4,220,391 of Krojak. Claims 15-18 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent Number 4,648,682 of Tubbs. Applicants traverse the rejections under 35 U.S.C. §102 and submit that claims 1, 2, 6-12 and 14-20 distinguish patentably over the cited references.

The present invention is directed to an automatically locking connector assembly for housing mating connector halves, such as Ethernet connector halves. The automatically locking connector assembly includes a housing assembly having a push-on, auto-latching connection mechanism that may be used to seal and protect an industry-standard Ethernet connector. The housing assembly comprises a first housing assembly for housing a first connector half, such as a jack, and a second housing assembly for housing a second connector half, such as a plug, for mating with the first connector half. The first connector half (i.e., a jack) may be removably snapped into place in the first housing assembly and the second connector half (i.e., a plug) may be removably snapped into place in the second housing assembly. When the first housing assembly mates with the second housing assembly, the housed plug and jack also mate in a sealed, protected environment.

The claimed assembly provides significant advantages, in addition to the protection of the jack and plug during mating and facilitation of a simple and automatic locking engagement of the first connector assembly to the second connector assembly without deformation of any components. For example, the claimed assembly allows a variety of industry standard jacks to be easily snapped into the environmentally sealed housing. The jacks and/or plugs can be easily removed from the housing and replaced. Different housing components may thus be easily retrofit to existing, standard connectors, such as the RJ-45 jacks and plugs prevalently used

today. A user can simply snap a selected industry standard connector half into the housing to assemble the connector assembly. The connector half may be removed from the housing so that the connector half and/or the housing may be used in another application without damaging any of the components.

The cited reference, alone or in combination, do not disclose or suggest mating connecting housings configured to house mating connector halves that axially mate with each other. In particular, neither reference discloses a connector assembly including housings each having a receptacle for receiving a connector half, as recited in claims 1-20. In addition, the cited references do not disclose a connector assembly capable of releasably housing mating connector halves, as also recited in claims 1-20.

The Behning '522 reference is directed to an electrical connector including integrated male and female electrical contacts configured to mate with each other. Each connector body in Behning '522 includes either male contacts or female contacts *integrally* formed with the respective connector body.

In contrast, the claimed invention, as set forth in claims 1-20, comprises connector housings, each forming a receptacle or cavity configured to receive a *separate* connector half, allowing for retrofitting a plug and/or jack in the assembly. The Behning '522 reference does not disclose mating connector housings each configured to *retroactively* receive a connector half in a receptacle, such as a cavity, formed therein. In addition, the Behning '522 reference does not disclose that each of the connector bodies *releasably* houses a corresponding connector half. Rather, the male and female contacts of Behning '522 form an integral part of each connector half and are not removable therefrom.

Regarding claim 19, the Behning '522 connector does not include a receptacle for *releasably* receiving and retaining a wired end of a plug, as described above. In addition, even if the cavity 6 of the receptacle 7 in the Behning '522 reference can be considered to receive a plug, the mating end of the plug does not protrude from the front end of housing receptacle, as recited in claim 19.

Claim 14 also distinguishes patentably over the Applicant's Admitted Prior Art (AAPA) of Figure 1, because the AAPA does not disclose a plug receptacle sized and configured to receive a *wired end* of a separate plug, such that the opposite end of the plug may mate with a corresponding jack. Rather, the so-called jack 20 of the conventional network connector, which

the Examiner considers to be a “plug receptacle”, is configured to receive the *mating* end of the male connector half, rather than house the wired end of the plug.

Regarding the rejection of claim 15 as being anticipated by the Krolak reference, the Krolak reference does not disclose second cavity formed in the housing. According to the Examiner, the Krolak reference discloses a jack housing 40 including a first cavity for receiving a jack and a second cavity 12 for receiving a telescoping portion of a plug housing. However, the “second cavity 12” of Krolak is not formed in the housing for the jack, but rather in the jack itself. To clarify the distinction, Applicants have amended claim 15 to specify that the cavity for receiving the jack is formed in the *back* end of the housing, as shown in Figures 8 and 9, and the cavity for receiving the telescoping plug housing is formed in the *front* end of the housing, a feature clearly not taught or suggested in the Krolak reference.

35 U.S.C. §103 Rejections

The Examiner rejects claims 3 and 4 under 35 U.S.C. §103(a) as being unpatentable over the Behning reference in view of U.S. Patent Number 5,240,436 of Bradley. The Examiner rejects claim 5 under 35 U.S.C. §103(a) as being unpatentable over claim the Behning reference and the Bradley reference in view of the Applicant’s Admitted Prior Art (AAPA). Claim 13 is rejected as being unpatentable over the Behning reference in view of the AAPA. Because independent claim 1, from which claims 3-5 and 13 depend, distinguishes patentably over the cited references, claims 3-5 and 13 are also patentable.

Furthermore, Applicants submit that the AAPA does not disclose a lever disabling groove, as alleged by the Examiner. Rather, the groove 29 is a *latching* groove for engaging a lever to retain a plug in a jack. The latching groove does not disengage or disable a lever, as set forth in claims 5 and 13, but performs an opposite function. The claimed lever disabling groove maintains a latching lever arm of a plug in a depressed position when the plug is retained in the corresponding housing. The disabling of the lever arm allows the plug and jack to be easily coupled and de-coupled through the coupling and de-coupling of the connector housings, without requiring a user to activate the cumbersome latch. In contrast, the AAPA requires a user to activate the latch to couple and decouple the plug and jack. Therefore, the AAPA does not disclose the claimed lever disabling groove, even though the claims are patentable nevertheless as depending on a patentable independent claim.

CONCLUSION

For the foregoing reasons, Applicant contends that claims 1-20 are allowable. As such, the Applicant respectfully requests that all outstanding rejections be reconsidered and withdrawn, and that the application be passed to allowance.

If there are any remaining issues, an opportunity for an interview is requested prior to the issuance of another Office Action. If the above amendments are not deemed to place this case in condition for allowance, the Examiner is urged to call the Applicant's representative at the telephone number listed below.

Applicant believes no additional fee is due with this response. However, if an additional fee is due, please charge our Deposit Account No. 12-0080, under Order No. ALS-017CP from which the undersigned is authorized to draw.

Dated: June 30, 2005

Respectfully submitted,

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Annotated Marked-up Drawing
Application No. 10/788783
By: Donald A. Serino
Title: Ruggedized Ethernet Connector Assembly
Atty. Docket No. ALS-018

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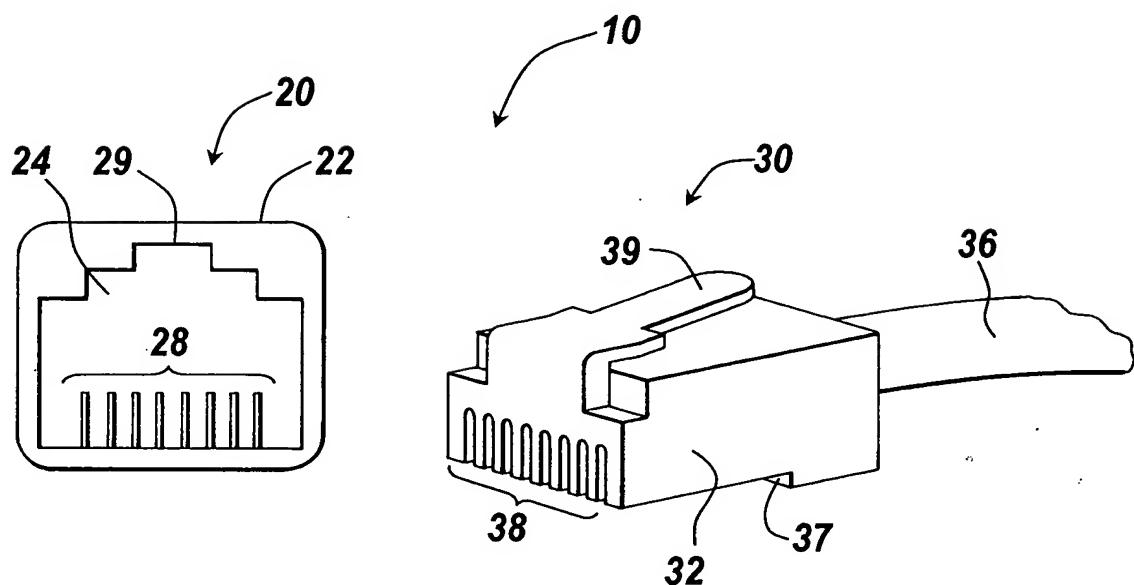


Fig. 1

PRIOR ART